

REBUTTAL TESTIMONY OF
ERIC H. BELL, P.E.
ON BEHALF OF
DOMINION ENERGY SOUTH CAROLINA, INC.
DOCKET NO. 2019-393-E

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**
2 **OCCUPATION.**

3 A. My name is Eric H. Bell. My business address is 220 Operation Way, Cayce,
4 South Carolina. I am Manager of Economic Resource Commitment for Dominion
5 Energy South Carolina, Inc. (“DESC”).
6

7 **Q. ARE YOU THE SAME ERIC BELL THAT OFFERED DIRECT**
8 **TESTIMONY IN THIS DOCKET?**

9 A. Yes, I am.
10

11 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

12 A. The purpose of my rebuttal testimony is to provide DESC’s response to
13 certain issues raised in the direct testimony of Ronald DiFelice, which was filed on
14 behalf of the South Carolina Solar Business Alliance, Inc. (“SCSBA”). My rebuttal
15 testimony sequentially addresses these issues as they appear in Mr. DiFelice’s
16 testimony.

1
2 **Q. ON PAGE 6, LINE 20 THROUGH LINE 21, AND ON PAGE 7, LINE 1**
3 **THROUGH LINE 8, MR. DIFELICE CLAIMS THERE ARE NO**
4 **“COMMERCIALLY REASONABLE OR POLICY GROUNDS” FOR**
5 **LIMITING DESC’S BATTERY STORAGE TARIFF (THE “TARIFF”) TO**
6 **ONLY NEW SOLAR FACILITIES WITHOUT EXISTING POWER**
7 **PURCHASE AGREEMENTS. DO YOU BELIEVE HIS CONCERNS ARE**
8 **REASONABLE?**

9 A. No. In fact, opening the Tariff to projects under existing power purchase
10 agreements (each, a “PPA”) would be commercially unreasonable given the rate
11 structure under existing PPAs. For example, many existing PPAs contain a rate
12 structure that already accounts for the capacity value provided by those projects.
13 However, per the Public Service Commission of South Carolina’s (the
14 “Commission”) ruling, all PPA rates for new projects have a capacity component.
15 The basis of these capacity components varies from PPA to PPA. Additionally,
16 the Tariff has a capacity rate applied to 100% of the discharge capacity of the
17 Storage QF. DESC did not design these rates to account for this compounding
18 effect, which means these capacity components should not be applied in
19 conjunction with the other. Therefore, if the Tariff’s stated, fixed rates were
20 applied to previously executed PPAs, there would be some double-counting of
21 capacity.

1 Additionally, as described in more detail by DESC Witness Kassis in his
2 direct testimony and rebuttal testimony, many of the existing PPAs contain higher,
3 stale avoided cost rates. From that standpoint alone, permitting these projects to
4 take part in the Tariff would only exacerbate the overpayment already occurring
5 under those PPAs, regardless of the capacity double-counting. Therefore, I
6 disagree with Mr. DiFelice's assessment because DESC made this decision, in part,
7 to protect DESC's customers from overpayment under existing PPAs.

8 To be clear, DESC will negotiate in good faith with projects that have
9 existing PPAs and wish to incorporate battery storage. However, given the nature
10 of the stated, fixed rates in this "standard-offer" Tariff—which were based upon
11 DESC's most recent avoided cost analysis—this rate structure is simply
12 inappropriate for use in conjunction with the stale avoided cost rates under existing
13 PPAs.

14
15 **Q. ARE THE CHARACTER OF SERVICE REQUIREMENTS SIGNIFICANT**
16 **TO THE RATES PROVIDED AND THE CORRESPONDING VALUE TO**
17 **CUSTOMERS, AS YOU DESCRIBED ABOVE?**

18 **A.** Yes. On page 7 of Mr. DiFelice's testimony, line 9 through line 20, Mr.
19 DiFelice implies that the terms of the Tariff can be decoupled from the rates, and
20 specifically states that "commentary on the specific payment values proposed for
21 Storage QF Capacity Rate and the Storage QF Energy-Shifting Rate are beyond the
22 scope of my testimony." However, these terms cannot be considered separately

1 from the Tariff's stated, fixed rates. Derived via study and approved methodology,
2 the Tariff's rates are avoided cost rates that indicate the benefit that DESC's
3 customers will receive if the facility performs as expected and as modelled using
4 the Avoided Cost Methodology. An eligible storage facility (a "Storage QF") must
5 have the ability to perform as modeled and specified in the contract, over the life of
6 the PPA to provide value commensurate with the calculated avoided cost rates.
7 Because the Tariff is a "standard offer" and a range resources with various
8 specifications and a range of benefits could apply for the Tariff, some requirements
9 and character of service specifications must be pillars of the value calculation.

10 Out of many specifications that can and will be used to provide a technical
11 description of each Storage QF, DESC chose (i) Storage QF power production
12 capacity, (ii) duration of discharge at the stated discharge capacity, and (iii) storage
13 size relative to the associated generator as factors by which the avoided cost
14 methodology calculation is anchored. It is important to note that the specifications
15 of the Storage QF, including those enumerated above, work in conjunction with and
16 build upon each other such that changing one term affects the appropriateness of
17 another term. Stated differently, the relaxing of a term in favor of a developer
18 cannot be viewed in isolation, as it will have ramifications for other parameters in
19 the Tariff, which all combine to impact the capacity and energy-shifting value that
20 the storage QF provides to the DESC system. Given the nature of the stated, fixed
21 rates in the Tariff, the relaxing of any term will typically result in a reduction in the
22 benefit to the DESC system and DESC's customers.

1 The structure and basis of the Tariff's stated, fixed rates reflects DESC's
2 consideration that utility-directed charging and discharging will maximize customer
3 value through optimal dispatch. Instead of tying revenue to production, DESC has
4 provided the full revenue and value of an optimal dispatch in the Tariff via fixed
5 monthly rates for both capacity and energy-shifting. In reality, the fixed monthly
6 payments in the Tariff actually reduce revenue risk for the developer and captures
7 more value for the customer.

8
9 **Q. ON PAGE 7, LINE 21, AND ON PAGE 8, LINE 1 THROUGH LINE 10, MR.**
10 **DIFELICE NOTES THAT THE TARIFF SHOULD BE EXPANDED TO**
11 **PERMIT STORAGE QFS TO PROVIDE POWER TO CERTAIN**
12 **"AUXILIARY LOADS." CAN THE TARIFF BE MODIFIED TO PERMIT**
13 **STORAGE QFS TO SERVE SUCH LOADS?**

14 **A.** Yes, the Tariff could be modified to permit Storage QFs to serve the
15 "Auxiliary Loads" mentioned by Mr. DiFelice. However, DESC has not yet
16 modelled such a scenario, but the Tariff's rates would almost certainly decrease if
17 the Storage QF's energy and capacity were permitted to serve auxiliary loads. The
18 type, amount, and frequency of these auxiliary loads may vary on a project-by-
19 project basis, which would further complicate accounting for such loads under the
20 Tariff's standard-offer structure. The reality is that auxiliary loads simply consume
21 the same energy that would be otherwise consumed by DESC's customers under the
22 Tariff. Although DESC could re-study the Tariff to account for auxiliary loads, it

1 seems the more appropriate avenue for those projects intending to serve auxiliary
2 loads outside of the Tariff would be to come to DESC separately with such a request
3 so that DESC could negotiate in good faith to determine appropriate commercial
4 terms.

5
6 **Q. ON PAGE 8, LINE 16 THROUGH LINE 22, AND ON PAGE 9, LINE 1**
7 **THROUGH LINE 8, MR. DIFELICE DISCUSSES DESC'S DESIRE TO**
8 **"CONTROL" THE STORAGE QF AND THE RESULTING**
9 **IMPLICATIONS ON CERTAIN ACCOUNTING CONCEPTS. CAN YOU**
10 **ADDRESS THESE CONCERNS?**

11 A. It is not DESC's intention to operate and control the Storage QF. Rather,
12 DESC simply intends to send dispatch signals (i.e., charge and discharge) to the
13 Storage QF's operator. Although the Storage QF must agree to comply with those
14 dispatch signals, the Storage QF owner will maintain control over the Storage QF,
15 and remain responsible for maintenance and periodic testing to ensure the Storage
16 QF's ability to meet the Tariff's specifications. The revised Tariff filed by DESC
17 Witness Kassis contains clarifying language to reflect this concept. Therefore,
18 DESC considers this issue resolved and there is no further need to address the
19 accounting standards referenced by Mr. DiFelice.

20
21 **Q. ON PAGE 9, LINE 14 THROUGH LINE 22, AND ON PAGE 10, LINE 1**
22 **THROUGH LINE 11, MR. DIFELICE EXPRESSES HIS CONCERNS**

1 **ABOUT THE TARIFF’S REQUIREMENT THAT THE STORAGE QF**
2 **“DELIVER ITS NAMEPLATE DISCHARGE CAPACITY FOR AT LEAST**
3 **FOUR (4) CONSECUTIVE HOURS.” CAN YOU PROVIDE ADDITIONAL**
4 **DETAILS AS TO WHY THIS REQUIREMENT IS APPROPRIATE?**

5 A. Yes. First and foremost, because the Tariff provides stated, fixed rates, it
6 cannot offer an optional three- or four-hour discharge time. It must be a set
7 discharge duration, and then the rates must be designed around that established
8 parameter. Four-hour discharge provides a range of benefits to the DESC system,
9 and is appropriate in this context.

10 The four-hour requirement is based upon DESC’s need to call upon the
11 Storage QF during peak times. The 6am to 9am pricing period mentioned by Mr.
12 DiFelice applies to a standard-offer for non-solar generators. It also ignores DESC’s
13 changing, real-time needs. As explained by DESC Witness Hanzlik in his direct
14 testimony, DESC’s dispatch of Storage QFs would be dictated by real-time
15 conditions on the DESC system and could be needed continuously for periods of up
16 to five hours. DESC Witness Hanzlik went on to explain that real-time conditions
17 may dictate that DESC instruct a Storage QF to discharge its full capacity over a 4-
18 hour period during an evening peak—whether summer or winter—or to address
19 other important system needs. Any decrease in the battery’s discharge duration
20 would simply not reflect the needs of the DESC system during peak times—the
21 times during which these Storage QFs are expected to provide the crux of their value
22 or be as valuable to address other system needs.

1 Additionally, any decrease in the battery's duration would necessitate a
2 corresponding reduction in the stated, fixed capacity and energy-shifting rates in the
3 Tariff. The current capacity value is based on the Commission Order No. 2020-244
4 from the avoided cost Docket 2019-184-E, in which the Commission set the avoided
5 capacity value based upon ORS Witness Horii's testimony. This rate is based on
6 the levelized cost of adding a combustion turbine to the system to supply capacity.
7 This is important because the combustion turbine can continuously supply DESC
8 24 hours per day, while the Storage QF is only required to discharge for four hours
9 at a time—yet, DESC utilizes the same capacity value for both. Any reduction in
10 battery duration would require DESC to revise the rates in the Tariff to reflect the
11 decreased value to the DESC system and maintain “accurate pricing,” as required
12 by the Settlement Agreement between DESC and the SCSBA.

13 As to whether the nameplate discharge capacity is the proper measure for the
14 corresponding discharge duration, the revised Tariff submitted by DESC Witness
15 Kassis contains language addressing this concern. Specifically, the revised Tariff
16 states that the Storage QF must be capable of delivering its “power production
17 discharge capacity” over the four-hour duration, rather than the nameplate discharge
18 capacity of the Storage QF. This revised language reflects DESC's intention that
19 the Storage QF be able to deliver the full amount of energy and capacity for which
20 DESC has contracted over that four-hour period.

1 Q. ON PAGE 10, LINE 19 THROUGH LINE 22, AND ON PAGE 11, LINE 1
2 THROUGH LINE 5, MR. DIFELICE STATES THAT REQUIRING THE
3 STORAGE QF TO BE CAPABLE OF CYCLING 365 TIMES IN A
4 CALENDAR YEAR IS “TECHNICALLY FEASIBLE” BUT
5 “COMMERCIALY UNREASONABLE.” CAN YOU ADDRESS THIS
6 CONCERN?

7 A. Yes. As an initial point, the Tariff does not require the Storage QF to cycle
8 365 times a year, only that it has the capability to operate over the contract term
9 with up to 365 full cycles per year and stay within an anticipated degradation rate.
10 DESC understands that the Storage QF’s input is limited to the energy available
11 from the sun, and the cycle requirement is a significant factor that was utilized in
12 modelling the maximum anticipated degradation rate if a charging source did exist
13 that could take the Storage QF to 365 cycles per year. The capability for 365 cycles
14 in a year protects the Storage QF from excessive degradation, but also provides a
15 design and operational limit that must be considered by the developer when
16 designing the Storage QF.

17 This is simply another parameter—just like the size limitations and voltage
18 requirements in the Tariff—to ensure that DESC’s customers receive the value
19 accurately reflected in the Tariff’s stated, fixed rates.

1 **Q. ON PAGE 11, LINE 8 THROUGH LINE 10, MR. DIFELICE STATES THAT**
2 **ANY DISPATCH BY DESC SHOULD BE SUBJECT TO A PERFORMANCE**
3 **GUARANTEE. IS SUCH A METRIC APPROPRIATE?**

4 A. DESC agrees with Mr. DiFelice's assertion that there should be parameters
5 placed upon the performance of the Storage QF (i.e., a performance guarantee), and
6 DESC included corresponding language in the revised Tariff filed by DESC Witness
7 Kassis. As evidenced by the revisions, DESC currently intends to require a 96%
8 performance guarantee that is consistent with applicable industry standards and tied
9 to the availability of the Storage QF. This number is commercially reasonable,
10 reflects a typical performance guarantee tied to combustion turbines, and is
11 appropriate here because the capacity value in the Tariff was calculated based upon
12 the avoided capacity cost of the same. Maintaining a threshold of 96% also gives
13 assurance to DESC that the Storage QF will be available to support DESC's critical
14 needs in the summer and winter months during high load periods—times when
15 Storage QFs can provide the anticipated capacity and energy-shifting benefit to the
16 DESC system.

17 This performance guarantee would be in the PPA under which the Storage
18 QF operates, and would ensure that the Storage QF could meet its obligations
19 thereunder even if it did not respond to every dispatch signal sent by DESC.
20 Although the performance guarantee provides some leeway to Storage QFs, the 96%
21 threshold is consistent with the capacity value in the Tariff and provides DESC

assurance that these Storage QFs can provide the value reflected in the Tariff's stated, fixed rates.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.